

Blue Rock Industries	)	Departmental
Cumberland County	)	Findings of Fact and Order
Westbrook, Maine	)	Air Emission License
A-246-71-I-R	)	

After review of the air emission license renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## I. REGISTRATION

### A. Introduction

Blue Rock Industries (Blue Rock), located in Westbrook, Maine has applied to renew their Air Emission License, permitting the operation of a dual-atomizer burner/counter-flow dryer for use in their asphalt pavement production facility.

### B. Emission Equipment

#### Asphalt Plant:

<u>Equipment</u>	<u>Process Rate</u> (tons/hour)	<u>Design Capacity</u> <u>Firing Rate</u>	<u>Control</u> <u>Devices</u>	<u>Stack</u> <u>ID</u>	<u>Date of</u> <u>Manufacture</u>
Dryer	150*	110 MMBtu/hr,	baghouse &	1	1995
	280*	797 gal/hr,#2 fuel & 110,000 cu.ft./hr, natural gas	cyclone		

\* 150 TPH when used as a batch plant  
280 TPH when used as a drum mix plant

#### Process Equipment

<u>Equipment</u>	<u>Process Rate</u> (tons/hour)	<u>Control</u> <u>Device</u>
Conveyor/Silo	5.6	Baghouse

C. Application Classification

The application for Blue Rock does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a renewal of current licensed emissions units only.

## II. BEST PRACTICAL TREATMENT

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Bureau of Air Quality regulations.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

### **Process Description**

Blue Rock had amended their air license in May 1995 to install a dual-atomizer burner/counter-flow dryer at their asphalt pavement production facility. The new equipment allowed recycling of old asphalt pavement in higher percentages than a batch plant without blue smoke and steam. The dryer can operate both as counter-flow drum-mixer for recycling or bituminous concrete production or as a batch plant utilizing the existing Cedarapids H-50 batch tower.

The batch production mode will operate at 150 tons per hour, and the drum-mixer mode will operate at 280 tons per hour. When used as a drum-mix the plant will operate continuously to fill three 200 ton silos.

The plant has been designed to reduce fuel consumption, lower exhaust gas temperatures and stack emissions. Operating continuously will also increase the fuel efficiency of the plant.

Blue Rock will operate a Magnum CF drum-mixer. The drum-mixer moves aggregates counter to the flow of the exhaust gas inside the drum. Aggregate is dried and heated by the exhaust gas in front of the burner flame. The aggregate then moves behind the flame into a mixing chamber that is isolated from the hot gas stream. It is behind the flame that the liquid asphalt, additives, fines and reclaimed asphalt

pavement are added to the mix, thus reducing the amount of blue smoke. The exhaust gas from the drum-mixer vents to a dust collection system which consists of a cyclone primary collector and a baghouse. This system reduces the baghouse loading, and increases filter bag life from the lower exhaust gas temperatures and reduced hydrocarbon and fines carry-over.

The plant will use a mineral filler to provide the fine material needed in the asphalt mixture. The mineral filler will be stored in a completely enclosed silo with a bin-top baghouse identical to a cement silo system. Enclosed screw conveyors will introduce the mineral filler directly into the dryer drum. This system will eliminate the need to stockpile very fine sand.

The plant will continue to operate on natural gas with #2 fuel oil as a backup fuel.

**A. Asphalt Plant**

To meet the requirements of Best Practical Treatment (BPT) for the control of particulate matter (PM) emissions from the asphalt plant, Blue Rock shall prevent visible emissions greater than 20% opacity based on a six-minute block average basis, except for no more than two (2), six (6) minute block averages in an 3-hour period. Emissions from the asphalt operation and dryer shall vent to a cyclone primary collector and a baghouse to meet the requirements of BPT.

The kiln fires primarily natural gas and #2 fuel oil. Regulated pollutants emitted from the dryer are particulate matter (PM), particulate matter with a diameter smaller than ten microns ( $PM_{10}$ ), sulfur dioxide ( $SO_2$ ), nitrogen oxides ( $NO_X$ ), carbon monoxide (CO), and volatile organic compounds (VOC). Emission factors for  $SO_2$  were derived from a mass balance for #2 fuel oil and based on AP-42 data (2004) for natural gas. Emission factors for  $NO_X$ , CO, and VOC are based on AP-42 data (2004) for #2 oil and natural gas.

Based on the above hot mix asphalt plant process rate, the PM emission rate from the asphalt baghouse shall be limited to 0.03 grs/dscf. The performance of the baghouse shall be constantly monitored by either one of the following at all times the dryer is operating:

1. PM detector - when the detector signals excessive PM concentrations in the exhaust stream, Blue Rock shall take corrective action within 24 hours, or immediately if opacity exceeds 20 percent.
2. Personnel with a current EPA Method 9 visible emissions certification – when the opacity exceeds 20%, the asphalt plant is operating with insufficient control and corrective action shall be taken immediately

Petroleum contaminated soil processing cannot exceed 10,000 cubic yards per year without prior approval from the Department. The facility shall only process soils contaminated with gasoline or #2 fuel without prior approval from the Department.

**B. Mineral Filler Conveyor/ Silo**

To meet the requirements of BPT for control of particulate matter (PM) emissions from the mineral filler silo, particulate emissions shall be vented through a baghouse maintained for 99% removal efficiency. Visible emissions from the mineral filler silo baghouse shall be limited to 5% opacity based on a six-minute block average basis.

**C. Stock Piles and Roadways**

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

**D. General Process Sources**

Visible emissions from a general process (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

**E. Facility Emissions and Fuel Use Caps**

Blue Rock Industries shall be limited to an annual (12 month rolling total) fuel cap of 56 million cubic feet per year of natural gas and 400,000 gal/year of #2 fuel oil and specification waste oil, with a sulfur content not to exceed 0.5% in the dryer. Blue Rock Industries shall not exceed the following emissions:

**Total Allowable Annual Emissions for the Facility**  
(used to calculate the annual license fee)

	Tons/Year					
	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
#2 Fuel Oil	0.07	0.07	14.10	3.92	9.27	2.28
Nat Gas	0.07	0.07	0.25	1.95	9.73	2.39
<b>Total</b>	<b>0.14</b>	<b>0.14</b>	<b>14.35</b>	<b>5.87</b>	<b>19.00</b>	<b>4.67</b>

### **III. AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non-major source shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

### **ORDER**

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-246-71-I-R, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions. [MEDEP Chapter 115]
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive

dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
  - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    2. pursuant to any other requirement of this license to perform stack testing.

- B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [MEDEP Chapter 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- [MEDEP Chapter 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

### **Specific Conditions**

#### **(16) Asphalt Plant**

- A. Emissions from the hot mix asphalt plant shall vent to a baghouse, and all components of the asphalt plant shall be maintained so as to prevent PM leaks. [MEDEP Chapter 115, BPT]
- B. The performance of the baghouse shall be constantly monitored by either one of the following at all times the Asphalt Plant is operating [MEDEP Chapter 115, BPT]:
  - 1. PM detector – when the detector signals excessive PM concentrations in the exhaust stream, Blue Rock shall take corrective action within 24 hours, or immediately if opacity exceeds 20%.
  - 2. Personnel with a current EPA Method 9 visible emissions certification – when the opacity exceeds 20%, the asphalt plant is operating with insufficient control and corrective action shall be taken immediately.
- C. To document maintenance of the baghouse, the license shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. The maintenance log shall be kept on-site at the asphalt plant location. [MEDEP Chapter 115, BPT]
- D. Opacity from the baghouse is limited to no greater than 20% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [MEDEP Chapter 101]
- E. General process emissions from the asphalt plant shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101]
- F. Fuel use records and receipts documenting the quantity received of #2 fuel oil and natural gas and sulfur content of the #2 fuel oil for the Asphalt Plant shall be maintained for at least six years and made available to the Department upon request. [MEDEP Chapter 115, BPT]
- G. Blue Rock shall be limited to the use of 400,000 gal/year of #2 fuel oil, with a sulfur content not to exceed 0.5% and 56,000,000 scf/yr of Natural Gas, both on a 12 month rolling total. Emissions from the baghouse shall not exceed the following [MEDEP Chapter 115, BPT]:



**#2 Fuel Oil**

<u>Pollutant</u>	<u>grs/dscf</u>	<u>lb/hr</u>
PM	0.03	0.27
PM <sub>10</sub>	-	0.27
SO <sub>2</sub>	-	55.39
NO <sub>x</sub>	-	15.4
CO	-	36.40
VOC	-	8.96

**Natural Gas**

<u>Pollutant</u>	<u>grs/dscf</u>	<u>lb/hr</u>
PM	0.03	0.27
PM <sub>10</sub>	-	0.27
SO <sub>2</sub>	-	0.95
NO <sub>x</sub>	-	7.28
CO	-	36.40
VOC	-	8.96

- H. The licensee shall not process more than 10,000 cubic yards of petroleum contaminated soils per year without prior approval from the Department. Processing of petroleum contaminated soils may require a solid waste processing facility license under 06-096CMR409. The material shall be handled in accordance with the requirements of the Bureau of Remediation and Waste Management. [MEDEP Chapter 115, BPT]
- I. Without prior approval from the Department, the licensee shall only process soils contaminated with gasoline and #2 fuel oil. [MEDEP Chapter 115, BPT]
- J. The licensee shall not process contaminated soils which are classified as hazardous waste or which have unknown contaminants. [MEDEP Chapter 115, BPT]
- K. When processing petroleum contaminated soils, the licensee shall maintain records which specify the quantity and type of contaminant in the soil, the origin of the soil and the contaminant, and the characterization of the contaminated soil. In addition when processing contaminated soil, the licensee shall maintain records of processing temperature, asphalt feed rate, fuel use, soil moisture content, and dryer throughput, on an hourly basis. [MEDEP Chapter 115, BPT]
- (17) **Mineral Filler Conveyor/Silo**  
Visible emissions from the mineral filler silo baghouse shall be limited to 5% opacity based on a six-minute block average basis. [MEDEP Chapter 115, BPT]

(18) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]

(19) **General Process Sources**

Visible emissions from any general process source shall (including conveyor belts) not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101 and Chapter 115, BPT]

(20) **Equipment Relocation** [MEDEP Chapter 115]

- a. Blue Rock shall notify the Bureau of Air Quality, by a written notification at least 10 days in advance, prior to relocation of any equipment carried on this license. The notification shall be sent to:

Attn: Relocation Notice  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

The notification shall include the address of the equipment's new location and the license number pertaining to the relocated equipment. If less than 10 days is necessary for notification, contact the regional inspector by phone to notify of the upcoming relocation. This phone contact with the regional inspector shall be followed up with a written notice of relocation with the appropriate information.

- b. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification will be made to the respective county commissioners.

(21) Blue Rock shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order. [MEDEP Chapter 115]

(22) Blue Rock shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard. [Title 38 MRSA §605-C]

Blue Rock Industries  
Cumberland County  
Westbrook, Maine  
A-246-71-I-R

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**Departmental  
Findings of Fact and Order  
Air Emission License**

(23) **Payment of Fees**

Blue Rock shall pay the annual air emission license fee within 30 days of **April 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §353-A]

DONE AND DATED IN AUGUSTA, MAINE THIS        DAY OF        2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

This license shall expire five years from the signature date above.

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/5/2004

Date of application acceptance: 3/22/2004

Date filed with the Board of Environmental Protection \_\_\_\_\_

This Order prepared by Jonathan Voisine, Bureau of Air Quality